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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,329	11/26/2003	Mikhail Arkhipov	13768.466	9473

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WORKMAN NYDEGGER/MICROSOFT
1000 EAGLE GATE TOWER
60 EAST SOUTH TEMPLE
SALT LAKE CITY, UT 84111

EXAMINER

RUTLEDGE, AMELIA L

ART UNIT

PAPER NUMBER

2176

DATE MAILED: 12/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/723,329	Applicant(s) ARKHIPOV ET AL.	
	Examiner Amelia Rutledge	Art Unit 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 25-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 25-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: Amendment, filed 09/25/2006; Request for Continued Examination, filed 09/25/2006.
2. Claims 1-15 and 25-37 are pending in the case. Claims 1, 9, 25, and 32 are independent claims. Claims 16-24 have been cancelled.
3. Claims 26-31 and 33-37 have been amended to overcome the previous rejections under 35 U.S.C. 112, second paragraph, which are therefore withdrawn.

Continued Examination Under 37 CFR 1.114

4. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/25/2006 has been entered.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-15 and 25-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (hereinafter "Chan"), U.S. Patent No. 6,799,718 issued October 2004, in view of NetBeans: The Definitive Guide (hereinafter "NetBeans"), Bodreau, et. al., published by O'Reilly, October 2002, p. 1-12 printed from <http://proquest.safaribooksonline.com/0596002807>.**

Regarding independent claim 1, Chan teaches an integrated development environment (IDE) for editing multilanguage documents (Abstract). Chan teaches accessing and editing a multilanguage file with a plurality of segments written in different programming languages (Col. 2, l. 52-Col. 3, l. 63), using secondary scanner and parser programs (Col. 7, l. 31-50 and Col. 8, l. 1-25). Chan teaches presenting the multilanguage file in a primary application view that includes the plurality of code segments (Fig. 5; Col. 8, l. 60-Col. 9, l. 56). Chan teaches enabling a user to edit the different segments from within the primary view, and teaches a text editor and user interface integrated with the primary scanner and at least one supplemental scanner (claims 31 and 32). Chan teaches a system for performing and tracking edits, and providing advanced editing functions, such as error detection, for sections of code for each of the various languages using secondary editors including parsers, scanners, converters, buffers, and engines (claims 10, 19, 20, 28, 34) to perform the editing functions for each language, mapped back to the main file M of the primary view (col. 8, l. 60-col. 9, l. 56; Fig. 5); compare to *without requiring the programmer to leave the primary application view to open or interface with the secondary editors, enabling the programmer to edit the different code segments of the multilanguage document from*

within the primary application view by editing code segments written in the primary language with the primary editor, and

by sending the at least one other code segment written in secondary programming language to one of the secondary editors so that thereafter, edits made in the primary application view will be performed by the secondary editor even though the programmer is working on the multilanguage document only in the primary application view.

While Chan teaches secondary scanner and parser programs, integrated with the text editor and user interface, Chan does not explicitly teach editing the other code segment written in the secondary programming language through interaction with the corresponding secondary editor, and displaying the other code segment written in the secondary programming language and the edits made within the primary application view and within the multilanguage document in which the other code segment is contained. However, NetBeans teaches editing code segments in secondary programming languages through interaction with secondary editors, and displaying the edits in the primary application view (Sect 3.11 "Other Editor Functionality"; Appendix A: A.1.1. "The XML Modules" and Appendix A: A.1.2. "The editor"; A.1.13. "Socket-Based Editor Support-the External Editor Module").

NetBeans was an Open Source IDE which contained editing modules and allowed programmers to extend and add on editing modules with advanced editing functionality for different languages, as discussed in Appendix A (A.1.1. "The XML Modules"; A: A.1.2. "The editor"; A.1.13. "Socket-Based Editor Support-the External

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Editor Module”). NetBeans taught two ways to open a file in the NetBeans Source Editor, either by the Open action, which would bring up a special editor, or the Edit action which would open the NetBeans Source Editor (Sect. 3.2 “Opening the Source Editor”). NetBeans discloses that the Source Editor edits HTML, XML, Java Properties files, and other programming languages as NetBeans core developers and external open source contributors add modules to handle those languages (Sect. 3.11. “Other Editor Functionality”). Therefore NetBeans teaches editing the other code segment written in the secondary programming language through interaction with the corresponding secondary editor, and displaying the other code segment written in the secondary programming language and the edits made within the primary application view and within the multilanguage document in which the other code segment is contained. Appendix A discloses how the editing functionality was added to the secondary editing modules.

Both Chan and NetBeans are directed toward multilanguage IDEs having advanced editing functionality. Both inventions teach editing different programming languages through a primary application view of a primary editor. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the modular, open source and extensible IDE of NetBeans having editing modules for different programming languages with advanced editing functionality to Chan, since Chan teaches a modular approach to providing completion assistance for different languages (Chan, col. 11, l. 45-col. 12, l. 48), including delegating sections of code to

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different engines, a modular programming approach which would have made the combination with the NetBeans editor modules both obvious and desirable.

Regarding dependent claims 2-3, Chan teaches that code for each language is parsed and stored separately (Col. 9, l. 16-56; Col. 7, l. 31-50 and Col. 8, l. 1-25), i.e., replicating secondary code languages to a secondary document. Chan teaches a mapping between the working files and the primary file (Col. 7, l. 31-50 and Col. 8, l. 1-25). Chan teaches a system for performing and tracking edits, and providing advanced editing functions, such as error detection, for sections of code for each of the various languages using secondary editors including parsers, scanners, converters, buffers, and engines (claims 10, 19, 20, 28, 34) to perform the editing functions for each language, mapped back to the main file M of the primary view (col. 8, l. 60-col. 9, l. 56; Fig. 5). Figure 5 shows how the edits are replicated to the secondary documents.

Regarding dependent claim 4, Chan teaches that the Chan teaches that code for each secondary language is parsed and stored separately (Col. 9, l. 16-56), in documents that are transparent, i.e., not visible to the user (col. 8, l. 31-59).

Regarding dependent claim 5, Chan teaches that code for the secondary documents may or may not require conversion from text format (Col. 7, l. 31-50 and Col. 8, l. 1-25) and that unconverted code is accumulated into a working file or buffer.

Regarding dependent claim 6, Chan teaches a mapping between working files and the primary file (Col. 7, l. 31-50 and Col. 8, l. 1-25; Fig. 5), and thus it is inherent in the disclosure of Chan that such a mapping would enable the primary editor to modify the multilanguage file in response to a change made to the secondary document, since the files were linked and updated.

Regarding dependent claim 7, Chan teaches that the primary file may be modified in response to advanced editing features of the secondary editor that are not inherently enabled by the primary editor, for example, using a Java Completion engine to modify code segments (Col. 12, l. 29-49).

Regarding dependent claim 8, Chan teaches syntax coloring (Col. 5, l. 64-65).

Regarding independent claim 9 Chan teaches an integrated development environment (IDE) for editing multilanguage documents (Abstract). Chan teaches accessing and editing a multilanguage file with a plurality of segments written in different programming languages (Col. 2, l. 52-Col. 3, l. 63), using secondary scanner and parser programs (Col. 7, l. 31-50 and Col. 8, l. 1-25). Chan teaches presenting the multilanguage file in a primary application view that includes the plurality of code segments (Fig. 5; Col. 8, l. 60-Col. 9, l. 56). Chan teaches enabling a user to edit the different segments from within the primary view, and teaches a text editor and user interface integrated with the primary scanner and at least one supplemental scanner

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(claims 31 and 32). Chan teaches a system for performing and tracking edits, and providing advanced editing functions, such as error detection, for sections of code for each of the various languages using secondary editors including parsers, scanners, converters, buffers, and engines (claims 10, 19, 20, 28, 34) to perform the editing functions for each language, mapped back to the main file M of the primary view (col. 8, l. 60-col. 9, l. 56; Fig. 5). Chan teaches a mapping between working files and the primary file (Col. 7, l. 31-50 and Col. 8, l. 1-25; Fig. 5), and thus it is inherent in the disclosure of Chan that such a mapping would enable the primary editor to modify the multilanguage file in response to a change made to the secondary document, since the files were linked and updated. Chan teaches providing completion assistance for both primary and secondary programming languages via the primary view (col. 11, l. 46-col. 12, l. 29); compare to *identifying whether the at least one other code segment written in a secondary programming language is a complete code segment, and if not, supplementing the at least one other code segments with additional data necessary to create complete source code for the at least one other code segment, so that it can be recognized and edited by the secondary editor for the language of the at least one other code segment*. Chan teaches that the primary editor modifies the primary application view to accommodate for the editing functionality provided by the secondary editors for the code segments in the secondary languages (col. 7, l. 17-51).

While Chan teaches secondary scanner and parser programs, integrated with the text editor and user interface, Chan does not explicitly teach secondary editors having advanced editing functionality not available within the primary editor. However,

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NetBeans teaches secondary editors having advanced editing functionality not available within the primary editor (Sect 3.11 “Other Editor Functionality”; Appendix A: A.1.1. “The XML Modules” and Appendix A: A.1.2. “The editor”; A.1.13. “Socket-Based Editor Support-the External Editor Module”), and which, without requiring the programmer to open or interface with the secondary editors, provide at least one other code segment to the secondary editor having advanced editing functionality for the language of that code segment.

NetBeans was an Open Source IDE which contained editing modules and allowed programmers to extend and add on editing modules with advanced editing functionality for different languages, as discussed in Appendix A (A.1.1. “The XML Modules”; A: A.1.2. “The editor”; A.1.13. “Socket-Based Editor Support-the External Editor Module”). NetBeans taught two ways to open a file in the NetBeans Source Editor, either by the Open action, which would bring up a special editor, or the Edit action which would open the NetBeans Source Editor (Sect. 3.2 “Opening the Source Editor”). NetBeans discloses that the Source Editor edits HTML, XML, Java Properties files, and other programming languages as NetBeans core developers and external open source contributors add modules to handle those languages (Sect. 3.11. “Other Editor Functionality”). Therefore NetBeans teaches that the editing modules can be accessed through the Source Editor without requiring the programmer to open or interface with the secondary editors. Appendix A discloses how the advanced editing functionality was added to the editing modules.

Both Chan and NetBeans are directed toward multilanguage IDEs having advanced editing functionality. Both inventions teach editing different programming languages through a primary application view of a primary editor. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the modular, open source and extensible IDE of NetBeans having editing modules for different programming languages with advanced editing functionality to Chan, since Chan teaches a modular approach to providing completion assistance for different languages (Chan, col. 11, l. 45-col. 12, l. 48), including delegating sections of code to different engines, a modular programming approach which would have made the combination with the NetBeans modules both obvious and desirable.

Regarding dependent claim 10, Chan teaches a menu in the primary application view created by the secondary completion engine, which is a completion assistance menu (Fig. 1, Col. 5, l. 25-37; Col. 12, l. 1-16).

Regarding dependent claims 11 and 12, Chan teaches that code for each language is parsed and stored separately (Col. 9, l. 16-56; Col. 7, l. 31-50 and Col. 8, l. 1-25), i.e., replicating secondary code languages to a secondary document. Chan teaches a mapping between the working files and the primary file (Col. 7, l. 31-50 and Col. 8, l. 1-25), and it is inherent in the teaching of Chan that such a mapping would enable the primary editor to replicate and modify the multilanguage file in response to a change made to the secondary document, since the files were linked. Chan teaches

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that the functionality provided by the secondary editors are not available to the primary editor, since Chan teaches the use of registered completion engines called from the IDE (col. 11, l. 46-col. 12, l. 67).

Regarding dependent claim 13, claim 13 is directed toward substantially similar subject matter as claimed in dependent claim 8, and is rejected along the same rationale.

Regarding dependent claims 14 and 15, Chan teaches a method of tracking the sections of code for the various languages by using mapping between buffers and the main file, i.e., primary document. The mapping function translates the structural and error information between the buffered code and the primary document (Col. 9, l. 16-63). It was inherent in the teaching of Chan that such a mapping would determine the validity edits and avoid replication, since the mapping enabled tracking of code position and changes in code between the primary document and the working files.

Regarding independent claim 25 and dependent claims 26-31, claims 25-31 reflect the computer program product used to implement the methods claimed in independent claim 1 and dependent claims 2-4 and 6-8, respectively, and are rejected along the same rationale.

Regarding independent claim 32 and dependent claims 33-36, claims 32-36 reflect the method and computer program product used to implement the methods claimed in independent claim 9 and dependent claims 10-12 and 13, respectively, and are rejected along the same rationale.

Regarding dependent claim 37, Chan teaches a method of tracking the sections of code for the various languages by using mapping between buffers and the main file, i.e., primary document. The mapping function translates the structural and error information between the buffered code and the primary document (Col. 9, l. 16-63). It was inherent in the disclosure of Chan that such a mapping would determine the validity edits and avoid an infinite loop of replication, since the mapping enabled tracking of code position and changes in code between the primary document and the working files.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 9, 25, 32, and the dependent claims have been considered but are moot in view of the new ground(s) of rejection. The new grounds of rejection includes the NetBeans reference, which is being relied upon to teach the newly claimed limitations of independent claims 1, 9, 25, 32. The newly claimed limitations include:

without requiring the programmer to leave the primary application view to open or interface with the secondary editors, enabling the programmer to edit the different

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code segments of the multilanguage document from within the primary application view by editing code segments written in the primary language with the primary editor,

sending the at least one other code segment written in secondary programming language to the corresponding secondary editor,

editing the at least one other code segment written in secondary programming language through interaction with the corresponding secondary editor, and

displaying the other code segment written in secondary programming language and the edits made thereto within the primary application view and within the multilanguage document in which the other code segment is contained (Claim 1).

and:

...the secondary editor having advanced editing functionality for the language for the at least one other code segment and having editing functionality not available within the primary editor... (claim 9).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hamilton, Software Development: Building Reliable Systems, Published by Prentice Hall, March 1999, Chapter 15, Section 6, p. 1 reprinted from Safari Books Online.


Discloses IDE with context sensitive editors for one or more programming languages.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amelia Rutledge whose telephone number is 571-272-7508. The examiner can normally be reached on Monday - Friday 9:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 571-272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AR



Doug Hutton
Primary Examiner
Technology Center 2100